

Performance Objectives And Instructional Cues	OUTLINE AND PRESENTATION
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LESSON PLAN

A. Course Title: PHYSICAL FITNESS

Instructional Goals:

1. This course will enable the participant to recognize the benefits of physical fitness and how it relates to a healthy lifestyle.
2. This course will identify various safety procedures utilized when participating in a fitness program.
3. This course will clearly and concisely identify agency fitness standards and norms.
4. This course will identify the various components of physical fitness and their relevance to law enforcement.
5. This course will identify fitness training guidelines when participating in a fitness program.

Instructional Objectives:

Upon completion of this course, participants will be able to:

1. Define the relevance of physical fitness and good health to fostering a positive self-image and promoting the interests of community policing.
2. Define the four components of fitness.
3. List the major cause of death in the United States.
4. Define the risk factors of cardiovascular disease.
5. Define hypertension and list the contributing factors of hypertension and its complications.
6. Identify the average body fat amounts for males and females.
7. List the benefits of a stretching program.
8. List the benefits of aerobic training program.
9. List the benefits of a strength training program.
10. List 5 basic aerobic activities
11. List the purposes and benefits of a warm-up session.
12. List the purposes and benefits of a cool-down session.

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B. Academy physical requirements

1. Demonstrate the ability to perform at a minimum level a variety of physical activities.

Instructional Methods:

Class lecture with class participation, handout materials, overheads, and audio-visual aids.

Handouts:

HO1

Estimated Time: 1 hours

Bibliography and References:

Anderson, Bob, 1997, *Stretching*, Shelter Publications, INC. Bolinas, California.

Cooper, Kenneth, 1995, *Advance Law Enforcement Physical Fitness Specialist Course*, The Cooper Institute for Aerobic Research, Dallas, Texas.

Heyward, Vivian. 1991. *Advanced Fitness Assessment and Exercise Prescription*. Human Kinetics Books, Champaign, Illinois.

Hoffman, Robert and Collingwood, R. Thomas 1995. *Fit for Duty*. Human Kinetics Books, Champaign, Illinois.

Instructor: _____ Presentation Date: _____

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Revised/Reviewed: 02/20/14

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OHD1

A. Good health and physical fitness foster a positive self-image and promotes interests of community policing.

1. Fitness is important to everyone. The more fit and healthy you are, the easier it is to deal with just about every aspect of life. Part of an officer's effectiveness is based on the image they present. A quote from an article in the April 1994 issue Law and Order magazine states: "An officer's image has a direct impact on his or her effectiveness within the community." The public judges officers by their physical appearance and their lifestyles, both of which are tied to fitness.

2. Research findings have consistently shown a link between lifestyle and disease. What you eat, whether you smoke, how much you drink, how you deal with stress, and your physical fitness all have a direct bearing on health as well as job performance.

3. The importance of staying fit can not be over emphasized. The Cooper Institute of Aerobic research in Dallas, Texas has been measuring the physical performance of various populations. Their data on more than 30,000 subjects are generally accepted as representative of the U.S. population as a whole and are often used as a point of reference when evaluating physical performance. One of the populations the Cooper Institute has studied law enforcement officers. The Cooper studies examined medical histories of law enforcement officers for medical problems. These officers represented small, medium, and large local, state, and federal agencies. The resulting data summarized in **Handout 1**. Survey data indicates that only 80% of officer's reach scheduled retirement. Fourteen percent take early retirement due to medical problems, and 6% die while employed as law enforcement.

HO1

B. Benefits of a fitness program

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	<ol style="list-style-type: none"> 1. Improved job performance. Studies have found that more physically fit officers generally receive higher job performance ratings. 2. Improved performance of essential physical tasks. For the unfit officer, this improvement may equate to satisfactory performance in areas which were previously below par. For the fit officer, it may mean improving already satisfactory performance to an even higher level. 3. Reduced likelihood of excessive force. More fit, confident officers are less likely to be involved in use-of-force situations for several reasons. A suspect may think twice about physically challenging a fit officer. A fit officer may be able to meet a physical challenge without resorting to the next level of force (e.g., going from grappling to using a baton). 4. Prevention of health problems. Better fitness not only restores health but also prevents health problems from developing. For example, regular vigorous physical activity helps prevent coronary heart disease and assists in weight control. Exercise builds muscular strength, endurance, and develops flexibility may protect against injury and disability. Physical activity also can bring about changes that help prevent and control hypertension (high blood pressure), heart disease, and diabetes. 5. Longer life. Better fitness can also contribute to longevity. In a study of 16,936 Harvard alumni over a 16-year period, those who expended at least 2,000 calories per week in physical activity had a 28% lower risk of death from any cause. 6. Less risk of disability. Many officers are unable to enjoy their retirement years fully because of health problems, which are directly related to lifestyle choices. Making changes in your lifestyle now can help ensure that you enjoy what you have worked so hard for. 7. The more fit you are, the easier it is to deal with just about every aspect of life. Exercise is the main way to develop physical fitness.

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OHD2	<p>C. Physical job tasks demands (here are the results of survey from the multijurisdictional Law Enforcement Physical Skills Survey (Wollack & Associates, 1992) that describe some of the demands on law enforcement officers.</p> <ol style="list-style-type: none"> 1. Running-the most frequent running tasks lasted less than a minute. However, over 11% of running tasks took over 2 minutes. 2. Climbing-most fences climbed were 5 feet high or lower. For stairs, one or two flights were usually involved. 3. Jumping-vaulting and jumping were generally done over obstacles of 3 feet or less. 4. Lifting and carrying-the majority of lifting and carrying tasks were unassisted, with weights of 50 pounds or less for distances of 20 feet or less. 5. Dragging and pulling tasks were predominantly unassisted, with most objects weighing less than 100 pounds and being moved less than 10 feet. 6. Pushing-most of the pushed objects weighed less than 100 pounds and were pushed a distance of less than 10 feet. For vehicles that were pushed, the distance moved was usually more than 30 feet and the move was done in less than a minute. 7. Use of force-for over 75% of the apprehensions, the amount of resistance was moderate or strong. The time it took to subdue a suspect was equally distributed among 30, 60, 120 seconds or more. <p>D. Legality of Physical Fitness in Law Enforcement</p> <ol style="list-style-type: none"> 1. Parker v. District of Columbia <ol style="list-style-type: none"> a. The District of Columbia Federal Court of Appeals approved a \$425,046 jury verdict in favor of a man who was shot by a District of Columbia police officer in the course of an arrest. The theory supporting liability was inadequate training. The officer had received no physical fitness training and was incapable of subduing Mr. Parker during a scuffle. When Mr. Parker made a movement consistent with reaching for a gun, the officer shot

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- Mr. Parker twice. Had the officer been physically fit and adequately trained in disarmament technique, a gun would never have been necessary, in the opinion of a majority of the court.
- b. Officer Hayes simply was not in adequate physical shape. This condition posed a foreseeable risk of harm to others. We are persuaded that a fair-minded jury could have concluded that officer Hayes's conduct was the result of deliberate indifference on their part of the District with respect to the physical training of the its police officers.
 - c. Law enforcement administrators should be particularly concerned that Parker deals with physical training of the veteran officer, not rookie training. Officer Hayes joined the D.C. Police Department in 1971 and earned a substantial history of achievement in the field before this incident. If a failure to train Officer Hayes to a higher level of physical fitness is a constitutional deprivation imagine how many other veteran officers are in an equivalent position of risk?

E. What is Physical Fitness

- 1. Physical fitness is the ability to perform physical activities, such as job tasks, with enough reserve for emergency situations and to enjoy recreational pursuits.

F. Four Components of Physical Fitness

- 1. Cardiovascular endurance- The body's ability to take in, deliver, and utilize oxygen at the cellular level. Cardiovascular endurance is sometimes referred to as aerobic fitness, maximal oxygen uptake, or V02 max, and generally decreases about 30% between the ages of 20 and 65.
- 2. Muscular Strength and endurance- The ability of the muscular system to perform work efficiently. Muscular strength is the maximum force or tension that can be produced by a muscle group. Muscular endurance is the ability of a muscle to maintain sub-maximum force levels for extended periods.

LO2

OHD3

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OHD4 LO3	<ol style="list-style-type: none"> 3. Flexibility- Ability to move a joint fluidly through its complete range of motion. 4. Body weight and body composition- Body weight refers to the size or mass of the individual. Body composition views the body weight in terms of the absolute and relative amounts of muscle, bone, and fat tissues. <p>G. Major Causes of death in the United States</p> <ol style="list-style-type: none"> 1. Cardiovascular diseases-924,810 died in 1997 2. Cancer (leading cause of death for those 45-65 of age)-537,390 died in 1997 3. Stroke-159,877 died in 1997 4. Accidents (leading cause of death for those 1-44 of age) –92,191 died in 1997 <p>H. Risk factors of cardiovascular disease.</p> <ol style="list-style-type: none"> 1. Major risk factors that cannot be changed <ol style="list-style-type: none"> a) Heredity- cardiovascular disease can be passed from one generation to another. b) Male gender-men have a greater chance of having a heart attack than women up to a certain age have. c) Increasing age-as we get older our chances of getting a heart attack or stroke increase. 2. Major risk factors associated with cardiovascular disease that can be changed <ol style="list-style-type: none"> a) Cigarette smoke b) High blood pressure->140/90 c) Blood levels-Bad/Good cholesterol ratio d) Physical inactivity
LO4	

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OHD5

3. Other risks factors

- a) Diabetes
- b) Obesity
- c) Stress

4. Prudent living

- a) Don't smoke
- b) Control high blood pressure (through diet and exercise).
- c) Reduce dietary intake of saturated fat and cholesterol (animal fats).
- d) Exercise regularly

I Blood pressure

1. Blood pressure is a normal feature of you heart's pumping action. When your heart beats, the pressure in your blood vessels increases. When your heart relaxes between beats, the pressure drops. More than 60 million Americans have high blood pressure. Twenty million are on medication. Approximately \$2.5 billion spent on medication annually.

2. There are two types of high blood pressure

- a) Essential: meaning there is not identifiable cause. This accounts for 90% of all people.
- b) Non-essential: due to kidney disease, diabetes, or another underlying disorder. This accounts for the remaining 10%.

LO5

3. Blood pressure has two readings:

- a) Systolic pressure (top number): the pressure in your arteries when your heart is actually beating.

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OHD6 LO6	<ul style="list-style-type: none"> <ul style="list-style-type: none"> b) Diastolic pressure (bottom number): the pressure in your arteries when your heart is relaxing between beats. 4. Blood pressure measurement <ul style="list-style-type: none"> a) Normal blood pressure: 120/80 (or lower) b) High blood pressure: 140/90 (or higher) 5. High blood pressure can cause damage to: <ul style="list-style-type: none"> a) Brain b) Kidneys c) Eyes d) Heart 6. Blood pressure fixed risks <ul style="list-style-type: none"> a) Heredity: people whose close relatives have high blood pressure may also develop high blood pressure. b) Race: in the U.S. African-Americans are more likely to develop high blood pressure. c) Sex: men are more likely to develop high blood pressure at an early age. d) Age: in the U.S. the odds of developing high blood pressure increases as we get older. In some countries blood pressure stays approximately the same throughout a person life span. So we know that blood pressure does not naturally increase with age. J. Body fat classifications <ul style="list-style-type: none"> 1. Excess fat has little functional significance and may, in fact, reduce the health and physical fitness status. Some body fat, however, is essential because it serves as an insulator to conserve body heat, fuel source, and act as

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padding to protect body organs. Fat is also required for many metabolic functions to occur.

HO2

a) Unhealthy

1) Men- under 5%

2) Women-under 12%

b) Elite Athlete

1) Men- 5% to 7%

2) Women- 12% to 14%

LO7

c) Excellent

1) Men- 7% to 10%

2) Women- 14 to 18%

d) Good

1) Men- 10% to 16%

2) Women- 18 to 22%

e) Acceptable

1) Men- 16% to 19%

2) Women- 22 to 26%

f) Borderline Unhealthy

1) Men- 19% to 24%

2) Women- 26 to 31%

g) Unhealthy

1) Men- Over 24%

2) Women- Over 31%

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OHD7

- K. Benefits of a stretching program
Slow static stretching has been found to have a low risk of injury, low degree of pain, low resistance to stretch, good effectiveness, excellent efficiency, and excellent practicality when compared to ballistic and Proprioceptive neuromuscular Facilitation (PNF-partner resistance) techniques.
 - 1. Stretching may assist the participant with many different movements.
 - 2. Stretching will assist the participant to develop body awareness.
 - 3. Stretching may help reduce the risk of injury during training.
 - 4. Stretching may reduce the amount of soreness resulting from training.
 - 5. Stretching can promote relaxation and reduce muscle tension.
 - 6. Stretching can promote circulation and prepare the body for exercise.
 - 7. Stretching can increase range of motion throughout the body.
 - 8. Stretching can reduce the risk of joint or muscle strain.

- L. Benefits of aerobic exercise
 - 1. Reduces risk of heart disease.
 - 2. Assists in controlling weight.
 - 3. Helps reduce stress.
 - 4. Reduces resting blood pressure.
 - 5. Raises levels of HDL-the good cholesterol.
 - 6. Helps regulate Type II diabetes mellitus.
 - 7. Helps prevent pulmonary disease.

LO8

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LO12	<ol style="list-style-type: none"> 1. Isometric training (no visible movement of joint) <ol style="list-style-type: none"> a) Involve the muscle contracting against an immovable and unvarying resistance. b) Equipment required: none 2. Isotonic training (visible movement of joint) <ol style="list-style-type: none"> a) Involve the muscle contraction in two phases <ol style="list-style-type: none"> 1) The concentric phase of movement the muscle shortens while applying resistance. 2) The eccentric phase of movement the muscle exerts tension while lengthening. 3. Isokinetic training <ol style="list-style-type: none"> a) Contractions occur when the speed of contraction is controlled and the resistance accommodates to the force applied. <p>P. Purpose and benefits of warm-up session</p> <ol style="list-style-type: none"> 1. Warm-up before physical activity to prepare the muscles for physical activity. The warm-up phase consists of two phases: light movement (walking/light jogging) followed by static stretches. Benefits include: <ol style="list-style-type: none"> a) Increase body temperature in preparation for exercise. b) Increase blood flow to the working cardiac and skeletal muscles in preparation for exercise. c) Decrease the chance of muscle and joint injury.
LO11 OHD9	<p>Q. Purpose and benefits of a cool-down</p> <ol style="list-style-type: none"> 1. During the cool-down phase, the individual continues exercising (walking, jogging, cycling) at a low

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intensity. Serves as a gradual transition from activity to rest.

- a) Prevent the pooling of blood in the extremities and reduce the possibility of dizziness and fainting.
- b) The continued pumping action of the muscles increases the venous return and speeds up the recovery rate.
- c) Reduces muscle soreness.
- d) Reduces the chance of injury.

R. Components of the Cooper assessment utilized by the Department of Public Safety

1. Aerobic test

- a) 1.5 mile run measures- aerobic endurance
- b) 300 meter run measures- anaerobic power

2. Strength and endurance test

- a) Leg press measures- muscular strength
- b) Chest press (muscular strength)
- c) One minute sit-up measures- muscular endurance
- d) One minute pushup measures- muscular endurance

3. Flexibility test

- a) Sit and reach measures- back and hamstring flexibility

4. Body Composition- two of the most frequently used and available methods are the skin fold and hydrostatic weighing method.

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- a) Skin fold method is a practical, relatively inexpensive, and time efficient method of assessing body composition. There are a variety of skin fold methods including a 3 site and 7-site approach. This method has a standard deviation of + or – three to five percent margin of error. Qualified trained instructor's are
- b) Hydrostatic (underwater) weighing is based on the fact that bone and muscle have a different density than fat and water. Therefore, a lean person will tend to sink and weigh more underwater than an obese person. The more a person weighs underwater, the greater the body density and the lower the percent body fat. This method is considered the golden standard for acquiring accurate body fat measurements.